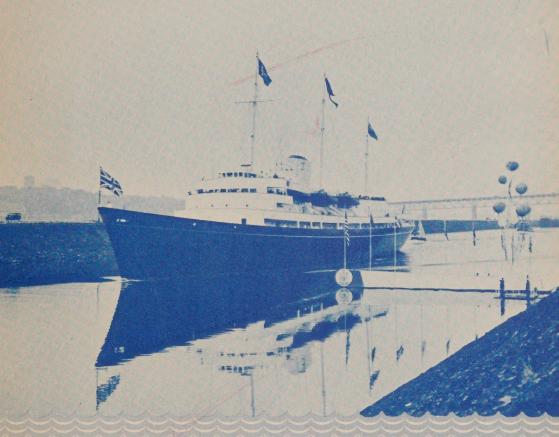


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ANNUAL REPORT

1959



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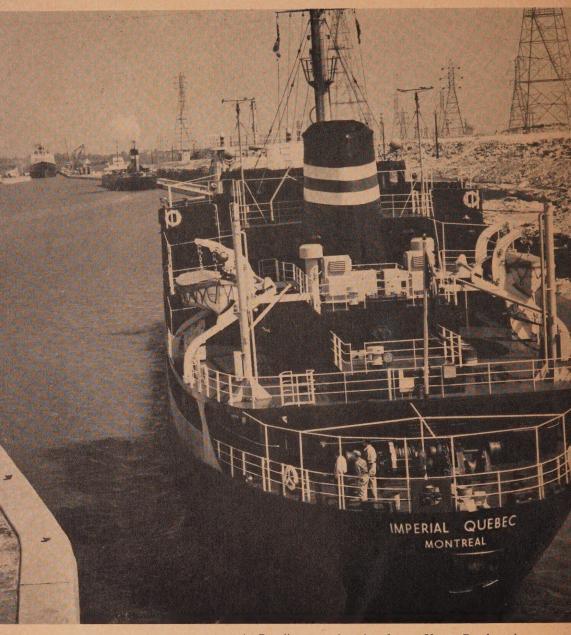
FROM THE BEQUEST OF
IRENE SPRY
PROFESSOR EMERITUS
DEPARTMENT OF ECONOMICS
UNIVERSITY OF OTTAWA

WESTERN HISTORIAN



### ANNUAL REPORT 1959





A Canadian coastal tanker leaves Upper Beauharnois Lock, downbound. At the lower end of the "pool" an ocean ship is about to leave the Lower Beauharnois Lock, upbound. A Canadian canaller lies at the tie-up wall.

### **Annual Report**

for the Fiscal Year ended

DECEMBER 31,

1959

### COVER PHOTO

The Royal Yacht, Britannia, with Her Majesty the Queen, President Dwight D. Eisenhower of the United States, Prime Minister John G. Diefenbaker and other official guests aboard, enters the ceremonial gateway downstream of St. Lambert Lock to open the St. Lawrence Seaway officially, June 26th, 1959.

PHOTO CREDITS: Cover, 89033, National Film Board. Frontispiece, 7569, page 2, Malak Studios. 88742, page 10, National Film Board. 7607, page 11, Malak Studios. 88863, page 16, National Film Board. 88859, page 17, National Film Board.

THE QUEEN'S PRINTER AND CONTROLLER OF STATIONERY OTTAWA, 1960

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March 31, 1960.

The Honourable George Hees, Minister of Transport, Ottawa, Ontario.

Dear Sir:

I beg to submit herewith the report of The St. Lawrence Seaway Authority for the period from January 1, 1959, to December 31, 1959, as required under Section 85, Subsection (3) of the Financial Administration Act, Chapter 116, R.S.C. 1952.

Respectfully submitted,

B. J. ROBERTS,

President.

### EXECUTIVE OFFICERS OF THE ST. LAWRENCE SEAWAY AUTHORITY

### AUTHORITY

B. J. ROBERTS, C.B.E., President

J.-C. LESSARD, Vice-President

\*C. W. WEST, Member

### OPERATION AND MAINTENANCE

R. J. BURNSIDE, Director

A. M. Luce, General Superintendent, Maintenance

D. M. MACKENZIE, General Superintendent, Operation

R. L'HEUREUX, Superintending Engineer-Eastern District

E. J. Rossi, Superintending Engineer—Central District

T. J. RYAN, Superintending Engineer-Western District

### **ENGINEERING**

A. G. MURPHY, Chief Engineer

L. H. BURPEE, Deputy Chief Engineer

### FINANCIAL

D. W. G. OLIVER, Comptroller

J. M. HENDERSON, Assistant Comptroller

L. E. BÉLAND, Purchasing Agent

W. M. SPRUNG, Chief, Tolls and Statistics

### LAW

L.-A. COUTURE, Counsel

J. T. CARVELL, Solicitor

### SECRETARY

of the Authority

P. E. R. MALCOLM, Secretary and Director of Administration

R. E. BÉLANGER, Personnel Officer

T. J. Quigg, Administration and Methods Officer

<sup>\*</sup> Retired on March 31, 1959.

### Annual Report 1959

This report covers the first year of operation of The St. Lawrence Seaway Authority, which was constituted as a Corporation by Chapter 24, Statutes of Canada, 1951, now Chapter 242, R.S.C., 1952. By virtue of the Act of Incorporation, The St. Lawrence Seaway Authority undertook the provision of facilities between Montreal and Lake Erie to allow 27-foot navigation, concurrently with the construction of similar facilities in the International Rapids Section of the St. Lawrence River by the Saint Lawrence Seaway Development Corporation of the United States.

The major part of the construction was completed by April, 1959 and, as provided for by the legislation, the Welland Canal, as well as the Cornwall, Lachine and Sault Ste Marie canals, were transferred from the Department of Transport to The St. Lawrence Seaway Authority for operation and management by Order in Council, P.C. 1959-204, effective April 1, 1959.

The St. Lawrence Seaway was opened to commercial traffic on April 25, 1959, when the C.G.S. *d'Iberville* and *Montcalm* entered St. Lambert Lock with the official party of the Minister of Transport and representatives of the press, radio and television.

The St. Lawrence Seaway was officially opened on June 26, 1959, when Her Majesty Queen Elizabeth and President Eisenhower of the United States boarded the Royal Yacht *Britannia* with their guests and proceeded through St. Lambert and Côte Ste Catherine locks to a naval review on Lake St. Louis.

The event was a memorable one in the history of Canada and to commemorate the event, the remarks made by Her Majesty the Queen and the President are reproduced at the end of this report.

### Traffic

The volume of traffic which made use of the new facilities provided by the St. Lawrence Seaway between Montreal and Lake Ontario reached a total of 20,590,000 tons, representing an increase of 75% or 8,830,000 tons, as compared with the traffic carried by the 14-foot canals during the year 1958. Traffic on the Welland Canal reached a total of 27,530,000 tons or an increase of 6,260,000 tons over the 1958 season of navigation. This represents an increase of 29%.

In February, 1960, The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation issued a statistical record of the traffic using the Seaway facilities during the navigation season of 1959. This report is obtainable from the Queen's Printer.

For statistical purposes, records were closed on January 14, 1960, which explains the slight variation between the figures quoted above and those shown in the traffic report. A summary of the final figures of the 1959 toll traffic appears below:

### Montreal—Lake Ontario Section

	1		1			P.Y				Upbound	Downbound	Total
No. of transits 1959										4,068	4,074	8,142
No. of transits 1958										5,647	5,598	11,245
Bulk Cargo-tons .										9,560,000	9,040,000	18,600,000
General Cargo—tons										1,390,000	600,000	1,990,000
1959 Cargo-tons .										10,950,000	9,640,000	20,590,000
1958 Cargo—tons .										4,670,000	7,092,000	11,762,000

### Welland Canal Section

		1							Upbound	Downbound	Total
No. of transits 1959		-							4,128	4,052	8,180
No. of transits 1958									4,405	4,331	8,736
Bulk Cargo-tons .									8,400,000	17, 250, 000	25,650,000
General Cargo—tons									1,260,000	620,000	1,880,000
1959 Cargo—tons .									9,660,000	17,870,000	27,530,000
1958 Cargo—tons .									5,005,000	16, 269, 000	21,274,000

On the new section of the Seaway, there was shown a substantial increase in the overseas trade of Canada and the United States in 1959 compared with 1958. This increase amounted to 4,500,000 tons. As to particular commodity movement, grain registered an increase of 2,000,000 tons, iron ore upbound 4,600,000 tons, and fuel oil 575,000 tons. There was a decrease of 160,000 tons in pulpwood.

On the Welland Canal, an increase in tonnage was registered by iron ore, 2,600,000 tons, by grain 1,400,000 tons, coal 700,000 tons and by sand, gravel and stone 300,000 tons. Small decreases in tonnage were shown in pulpwood 180,000 tons, fuel oil 115,000 tons and gasoline 50,000 tons. Traffic in newsprint remained at about the same level.

### Engineering

With the completion of most of the construction work, the engineering staff has been substantially reduced when compared with the peak years of the construction period. As of the year end, the personnel of this branch stood at 139 as against a maximum of 423 in 1957.

The field offices at St. Lambert, Côte Ste-Catherine and Iroquois were closed during 1959.

As already mentioned, the waterway was opened to through traffic from the Great Lakes to Montreal on April 25, 1959, but a temporary restriction of draught to 22'6" was imposed pending the completion of certain dredging. At that time, all the other major construction contracts,

totalling some 138, were virtually completed, as were some 42 contracts for the supply of lock and bridge components and machinery. Of the 16 dredging contracts awarded prior to 1959, 11 had been completed at the end of the year, while a new contract for some minor clean-up was planned for 1960. The restrictions of draught imposed at the spring opening of navigation was lifted before the official opening of the Seaway on June 26, at which time the full design depth was available. While the Seaway was fully operational, a certain amount of clean-up work was in progress, and dredging operations continued as the channels were widened to the design specifications. It is expected that the program of construction dredging will be completed in 1960.

he following dredging is outstanding:	cu. yds.
Contract No. 35, Montreal Harbour Turning Basin	149,000
Contract No. 7, Lake St. Louis (clean-up)	11,000
Contract No. 10, Lake St. Francis (clean-up)	15,000
Contract No. 85, Cornwall Island North Channel.	159,138
Contract No. 86, Cornwall Island North Channel	
and South Channel (clean up)	699,521
Contract No. 232, Brockville Narrows (clean-up)	400
Total estimated dredging to complete contracts	1.034.059

Total estimated dredging to complete contracts 1,034,059

Contracts were let in 1959 for the construction of a high level highway bridge to connect the City of Cornwall with Cornwall Island and the new high level bridge over the South Channel. This is to replace the present converted single track railway bridge. Of the 24 piers required, 8 have been completed and the remainder are under construction. The contract for the superstructure was awarded on October 23, 1959. The bridge is scheduled for completion by June 30, 1961.

Other work initiated during the year includes the letting of four contracts providing for the construction during the 1959-60 winter months of extensions to the existing approach walls on locks 1, 2 and 3 and the guard gate on the Welland Canal, the objective being to increase the traffic capacity of this link in the system. Construction is proceeding this winter and the work is scheduled for completion before the opening of navigation in the spring. For purposes of evaluation, designs and cost estimates are being prepared for a possible future duplication of the single locks on this canal.

Other scheduled construction work still incomplete includes installation of fendering on approach walls at Beauharnois, landscaping of the various lock areas and the design and construction of a gate lifter.

In addition to the foregoing, certain construction work initiated by the Department of Transport in connection with the older canals has been taken over by the Authority. Included is a new second bascule bridge over the Lachine Canal at Ville Saint-Pierre, Québec, which was opened to traffic on December 8, 1959, and certain improvements to conditions in the vicinity of the old Second Welland Canal at Thorold, Merritton and St. Catharines, Ontario.



Cote Ste. Catherine Lock, second from the Seaway entrance, overcomes the 30-foot fall of water through the Lachine Rapids, right.

A summary of progress over the past year showing total quantities of the major items of dredging, excavation, concrete and cement follows:

### Summary of Progress Quantities

	Total to Dec. 31, 1958	Added 1959	Estimated for 1960	Estimated Final Totals
Dredging				
Common, cu. yds	12,871,597	2,483,224	995,722	16,350,543
Rock, cu. yds	1,270,083	116,518	38,337	1,424,938
Excavation				
Common, cu. yds	27,531,581	72,369	275,900	27,879,850
Rock, cu. yds.		1,423		28, 231, 418
Concrete, cu. yds		23,258	28,053	2,221,859
Cement, bags	_, _, _, _,	139,548	150,318	12,879,911

### Contractors' Claims

Claims filed by contractors engaged on Seaway construction have reached a total of \$43,900,000. This figure includes certain items which in the process of concluding contract payments are found to be adjustable within the terms of the contracts, as in the case of approved additional work or additional quantities where dispute as to quantity determinations has arisen. Claims which have been settled to date amount to \$3,643,000 and involved payments of \$2,895,000, the most of which related to unit price adjustments arising from reclassification of material excavated or dredged. The investigation of claims for a face amount of \$26,300,000 has been completed and offers of settlement involving about \$1,750,000 have been or are in course of being made. There remains a balance of claims totalling \$13,900,000 still under investigation.

St. Lawrence Seaway locks are manned and operate around the clock, seven days a week, during the seven-and-a-half month navigation season. This is Lower Beauharnois Lock, April 25th, opening day for navigation. Nearest ship is *Prins Willem George Frederik*, Netherlands flag, first ocean ship through the Seaway.



### Operation and Maintenance

The function of operating and maintaining all canals in the system falls upon the newly-created Operation and Maintenance Branch, headed by the Director, with headquarters in the Authority's building at Cornwall, Ontario. Supporting staff there includes a General Superintendent of Operation and a General Superintendent of Maintenance, with engineering, technical, administrative and clerical personnel. There are three district organizations, each under the supervision of a Superintending Engineer: Eastern, comprising the South Shore and Lachine canals; Central, comprising the Beauharnois, Iroquois and Cornwall canals; and Western, comprising the Welland and Sault Ste-Marie canals.

The district staffs consist of approximately 275 maintenance personnel including electricians, transmission linemen, machinists, mechanics, welders, blacksmiths, carpenters and riggers, together with approximately 725 operating personnel, who operate the locks, bridges and other structures. At each lock, for instance, a lockmaster, two lockmotormen and four linesmen are required on each of three shifts. The navigation season on the St. Lawrence River canals normally extends from the middle of April to the end of November and on the Welland canal from the 1st of April to the middle of December. During this period, all Seaway structures are operated 24 hours a day, seven days a week.

### Navigation

Because of the severe ice conditions, the worst encountered in many years, the scheduled opening of the Seaway from Montreal to Lake Ontario was delayed from April 20th to April 25th. A large number of vessels waiting to transit had accumulated at Montreal harbour and thus the capacity of the locks was strained to the utmost during the first period of the navigation season. Although the Welland canal was put into operation on April 6th, even here, due to a heavy accumulation of ice in Port Colborne harbour and along the shores of Lake Erie, only three vessels were able to make passage through the canal before April 17th. Traffic began through the Canadian Sault Canal on April 13th.

Other problems encountered during the preparatory period prior to the opening included placing of aids to navigation by the Department of Transport on the new open water sections of the Seaway extending some 110 miles from Montreal to Iroquois, Ontario, a task also hampered by the late spring break-up, and the training of vessel traffic controllers, lockmasters, lockmotormen and other operating personnel whose experience had been limited to the shallow-draft Quebec and Ontario-St. Lawrence canals.

Due to the great influx of ocean vessels from practically all parts of the world, difficulty was sometimes experienced in obtaining a sufficient number of qualified pilots to ensure a smooth flow of traffic and, of course, the language barrier at times hampered communications. It was also found that many of the ocean vessels preferred to lie at anchor during the hours of darkness and this practice resulted in some disruption to traffic, since the locks, which had been idle during part of the night, were unable, the following morning, to handle these vessels in addition to those which had continued passage during the night and were then ready to enter the locks.

Some troubles were encountered due to inexperience on the part of those in charge of deep sea vessels in transiting inland waters and canals. However, the ships' officers proved most co-operative, and, by the end of the season, were beginning to adjust to the unfamiliar navigating conditions.

At the Welland canal, serious delays were periodically occasioned to vessels when they were required to wait at anchor at either Lake Ontario or Lake Erie for passage through the canal. During such periods it sometimes became necessary to grant priority to certain bulk carriers in order to expedite the passage of such essential shipping. Also on the Welland canal it was found that the fender booms while in the raised position were particularly vulnerable to, and were, in fact, often struck by ocean vessels with their wide flaring bows. Some 85 hours of navigation delays resulted from accidents involving these fender booms. However, it is felt that with the machinery modification now being carried out and described elsewhere in this report, this problem will no longer exist in 1960.

The St. Lawrence River canals were officially closed to navigation on November 30th; the Canadian Sault on December 12th, and the Welland canal on December 15th. In spite of the various problems, many of which might well have been expected during the first year of operation on a project of this magnitude, it is felt that the Seaway's first year was satisfactory.

### Accidents and Delays

During the course of the year, delays to navigation were occasioned by a variety of causes, among them high winds and fog, minor equipment failures and vessel accidents. Such minor electrical and mechanical troubles as blown fuses, limit switches requiring adjustments and broken shear pins in operating machinery could, however, have serious consequences. As an example, there is the case of a minor electrical failure which prevented the Valleyfield lift bridge from being raised as a downbound vessel was approaching for passage. On attempting to come to an emergent stop the vessel swung crosswise in the channel and came to rest against the bridge abutment, narrowly avoiding serious damage to the lift span, with a resultant major traffic delay. A more lengthy delay occurred on the Welland canal at Lock 4, due to the failure of the anchor bolts on one of the mitre sill timbers with a resultant splitting of the timber, which necessitated the unwatering of the lock and replacement of the sill timber. A number of traffic delays were also caused by vessels striking fender booms, piers, entrance walls and other canal structures. It may be pointed out that a breakdown of the statistics on vessel accidents on the

Welland canal reveals that only four inland vessels per 1000 passages were involved in such accidents, as compared with 34 ocean vessels per 1000 passages. The record on the Welland canal further indicates that there were 110 vessels involved in accidents during the navigation season which resulted in approximately 128 hours of delays to navigation. Also there were 80 equipment failures which resulted in approximately 233 hours of delays.

### Shops and Equipment

At each of its district headquarters the Authority maintains machine shops, electrical shops, carpentry shops, vehicle repair garages, welding and blacksmith shops, fully equipped to handle the majority of its own maintenance and repair work including the fabrication of new parts as required.

In addition, the Authority operates and maintains a fleet of tugs, work-boats, gatelifters, derrick scows, deck scows, sweep scows and other small craft, as well as a line of land based construction equipment including cranes, shovels, bulldozers, tractors, front end loaders, compressors, pumps, welding machines, vehicles and other construction tools and equipment.

### **Improvements**

During the course of the year a number of improvement projects were carried out and plans and specifications prepared for the winter improvement works program. These included such items as the construction of a new bascule bridge over the Lachine canal at Ville Saint-Pierre; continuation of the Second Welland canal cleanup project; planting of 5000 trees along the Welland canal to act as a windbreak; the completion, except for paving, of a new causeway at Cardinal, Ontario; installation of new automatic fire protection systems in the standby diesel rooms on the new locks; erection of temporary shop facilities at the new locks; modification of mooring bollards on the Welland canal; provision of 600 feet of emergency tie-up space on the South Shore canal.

At the close of navigation, work was started immediately on the modification of 13 wire rope fenders on the Welland canal. This modification will permit the fenders to be raised to a near vertical position, thus minimizing the possibility of being struck by vessels with flared superstructures. As a result of the failure of one lock sill timber at Lock 4 on the Welland canal, plans were made for a program to replace the timber sills with steel and concrete and to this end a contract was let for the installation of ten such sills. Plans were also made for improvements to the remaining timber sills and this work was begun by Authority forces.

### Maintenance

A complete program of preventive and corrective maintenance on all equipment, structures and machinery, including regular lubrication of all

machinery parts and wire ropes for bridges, valves and fenders, was carried out on all canals. This being the first year of operation of the new locks, the maintenance work load was abnormally high due to the necessity for minor adjustments during the initial machinery break-in period.

During the course of the navigation season many fender booms on the Welland canal were replaced after being damaged while in the open position, and two booms were replaced at St. Lambert lock after being struck while in the closed position. Also at the Welland canal a number of gate ropes were replaced due to age or wear, although actual delays to navigation were caused by only three gate rope failures. Rip-rap was placed at various locations on the South Shore and Welland canals to prevent bank erosion.

Plans were formulated for a major winter maintenance works program and unwatering of the locks was carried out immediately after the close of navigation to facilitate the work.

Some of the major items planned for the Welland canal included replacement of the counterweight ropes on 3 vertical lift bridges; replacement of 6 fender ropes; replacement of half the total number of gate ropes; repaving the deck of bridge 18 and complete replacement of 6 timber mitre sills; diversion of transmission lines in the vicinity of the new tie-up walls and relocation of the sub-station at bridge 4 to permit construction of the new high level crossing of the canal by the Queen Elizabeth Way, near Homer, Ontario.

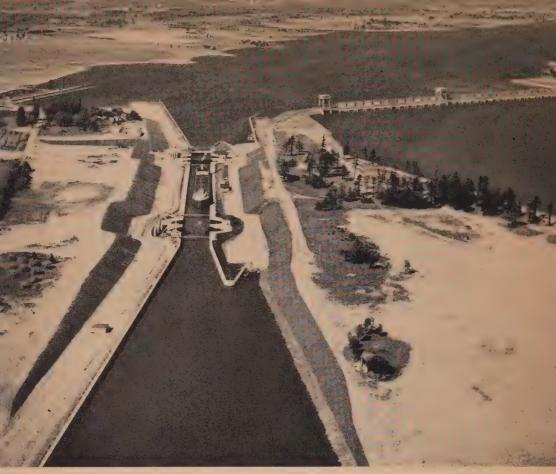
At the Sault Ste-Marie canal the program of refacing the masonry lock walls with concrete was continued and work was started on replacement of a mitre sill.

On the new canal system a few of the major maintenance items included retensioning, under contract, of the counterweight cables on six vertical lift bridges; modification of the airtight bulkheads; installation of power lines for "Limit of Approach" signs at Beauharnois and erection of lighting standards for the north tie-up wall at Upper Beauharnois lock.

In conjunction with the visit of Her Majesty, The Queen, for the official opening ceremonies, considerable preparation was carried out by the maintenance forces. Floating docks were positioned, platforms, flagpoles, signs, etc., were erected, special timber fendering for the protection of the royal yacht was placed, and some landscaping completed. Many months of advance planning were required to facilitate the passage of the royal yacht and the attendant navy escort and to minimize delays to an extremely heavy concentration of commercial shipping which was taxing the capacity of the system at that time.

### **Hydraulics**

The flow of water through the canals is regulated by means of a network of dams and weirs to prevent flooding, maintain proper navigation levels and provide sufficient quantities for power generation, municipal water supplies and other leased water rights.



A Canadian laker moves upbound through Iroquois Lock. To right is Iroquois Control Dam at western end of Lake St. Lawrence.

The usual governing depth of the Lachine Canal is 14 feet 3 inches. Due to low water levels on the lakes during the 1959 season, however, it became necessary to reduce, from time to time, the published available depth for vessels transiting this canal. The minimum depth during the season was 13 feet 6 inches.

### **Finance**

### Capital Instruction

Contracts awarded for construction work and for lock machinery and equipment, as at December 31, 1959, totalled approximately \$274,852,500, against which there had been recorded expenditures amounting to \$255,124,500. After allowing for lapsed balances on completed contracts, outstanding commitments total approximately \$18,000,000.

Total capital expenditures to December 31, 1959, were \$310,650,000, made up as follows:

Construction and supply contracts	\$255,124,500
Land expropriations	6,700,000
Sundry (including field labour; cost of relo-	
cations of tracks, signals and communica-	
tions; and payments to power entities for	
dredging in the International section	14,215,500
Equipment (shore, floating, shop, etc.)	1,510,000
Administration and Engineering expenses	16,700,000
Interest during construction	16,400,000
	\$310,650,000

Capital expenditures are financed by loans from the Government of Canada. The amount borrowed during 1959 was \$27,500,000, bringing the

One of the larger lakers, 636 feet long, sails from Lake Ontario toward Iroquois Lock. Main purpose of the Seaway was to allow these hitherto lake-bound giants to reach Montreal and lower river ports. A number can carry over 20,000 tons of cargo, each.



total of loans outstanding at December 31, 1959, to \$285,500,000. This amount, representing actual cash requirements, is considerably less than the indicated total charges to capital account of \$310,650,000, due to such outstanding items as interest during construction, holdbacks on contracts and other charges in process of payment, as well as to the employment temporarily of current cash from operations to finance capital expenditures. Interest rates charged by the Department of Finance have varied, being influenced by the cost of Government borrowings. Details of loans to the Authority are:

April 1955 to March 1956 \$23	1,500,000 a	at $3\frac{1}{4}\%$
June 1956 to March 1957 50	6,000,000 a	at $3\frac{5}{8}\%$
May 1957 to November 1957 54	4,500,000 a	at $4\frac{1}{8}\%$
Nov. 1957 to March 1958 40	0,000,000 a	at $4\frac{3}{8}\%$
April 1958 to September 1958 62	2,000,000 a	at $4\frac{1}{8}\%$
Oct. 1958 to March 1959 30	6,000,000 a	at $4\frac{1}{2}\%$
April 1959 to September 1959 14	4,000,000 a	at 5 %
December 1959	1,500,000 a	at $5\frac{3}{4}\%$

By arrangement, payment of interest on construction loans is deferred until the end of the first year of Seaway operation.

### Tolls

The St. Lawrence Seaway Authority Act requires that there be established a tariff of tolls under which there would be recovered the expenditures by Canada for Seaway operation and maintenance, interest and amortization of capital within a 50-year period. United States legislation, which authorized construction of Seaway locks on the United States side of the International Rapids section, carries similar authorization to cover their expenditures.

The Tolls Committees of Canada and of the United States recommended a tariff of tolls which, based on an estimate of the respective (Canadian and United States) cost of operation and maintenance, interest and amortization of capital expenditures within the 50-year period, would meet the requirements of the legislation. The Tolls Committees recommended that the toll revenue earned in the St. Lawrence section, i.e., between Montreal and Lake Ontario, be divided in the proportion of the respective annual charges of the two entities, (The St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corporation). These proportions were tentatively established at 71% to The St. Lawrence Seaway Authority and 29% to the Saint Lawrence Seaway Development Corporation.

By agreement between Canada and the United States dated March 9, 1959, the tariff was approved and the basis of distribution determined. It was also agreed that the Authority would be assigned the responsibility for the billing and collecting of tolls, accounting to the Saint Lawrence Seaway Development Corporation for the United States portion of the revenue.

The tolls derived from the Welland canal accrue exclusively to Canada. Totals of tolls assessed for the 1959 season of navigation are as follows:

St. Lawrence Section (Montreal to Lake Ontario)

Canada . . . . . . \$7,105,279 United States . . . 2,949,187 \$10,054,466 Welland Canal 1,224,062

It may be noticed that the traffic report of the St. Lawrence Seaway for 1959 (previously referred to) showed total toll revenue for the St. Lawrence section (Montreal to Lake Ontario) of \$9,889,696 and for Welland canal, \$1,206,163. The respective differences between the figures in the statistical report and the totals shown above as actual recorded revenues are due to the fact that the traffic report was prepared for publication about January 15, 1960, since which date there was brought into the 1959 accounts by accrual the remaining tolls revenue of 1959 respecting which steamship companies' reports had not been furnished by the time the traffic report was compiled.

### **Income and Expenses**

As the Montreal-Lake Ontario section of the Seaway went into operation on April 25th, the income and expense statement records transactions from that date, organization expense having been capitalized. Welland canal revenue and expense are recorded from April 1, the date of transfer.

Authority income amounted to \$9,214,475, comprising toll revenue of \$7,105,279 assessed for transits through the new Seaway locks between Montreal and Lake Ontario, and \$1,224,062 on transits through the Welland canal; plus sundry revenues (rentals, wharfage, bridge revenue, etc.) amounting to \$885,134.

Operating and maintenance expenses amounted to \$2,917,501, and administrative expenses were \$1,134,955, making a total of \$4,052,456. Of this expenditure \$99,236 was recovered from non-toll canals, resulting in a net administration and operating cost of \$3,953,220. Net operating income available for debt service was, therefore, \$5,261,255. The applicable interest charge was \$7,994,496, which exceeded the net operating income by \$2,733,241. After recording a charge of \$3,955,065 for depreciation, a net loss of \$6,688,306 for the period is shown.

At the end of March, 1960, an interest payment of \$5,000,000 was made to the Government

In view of the provisions of the international agreement relative to the distribution of tolls on the Montreal to Lake Ontario section of the Seaway and the fact that the operation of the Welland canal relates to Canada only, the Authority, in its internal accounting, records the respective revenues and expenses of these sections separately and makes the appropriate distribution of overhead administrative costs. For the period under review, the

Montreal to Lake Ontario section was \$1,456,796 short of meeting the full amount of interest on debt, while the Welland canal showed a deficiency of \$1,276,445, as set out in the following statement:

	St. Lawrence River (Montreal to Lake Ontario)	Welland Canal	Ťotal
Income:			
Tolls assessed	\$7,105,279	\$1,224,062	\$8,329,341
Miscellaneous	254,778	630, 355	885, 134
	\$7,360,057	\$1,854,417	\$9,214,475
Expense:			
Operating, maintenance and proportion of adminis-			
trative expense	\$1,465,914	\$2,487,306	\$3,953,220
Net operating income (Or deficit) available for debt service	\$5,894,143	\$-632,888	\$5,261,255
Interest	1 = 0 # 0 0 0 0	\$ 643,557	\$7,994,496
Amount by which interest was not earned	\$1,456,796	\$1,276,445	\$2,733,241

### Source and Application of Revenue

The following statement indicates the source and application of Seaway revenue (Canadian portion):

Source	Dollars	%
Seaway tolls	\$8,329,341	90.39
Bridge revenue	206,810	2,24
Miscellaneous sources	678, 324	7.37
	\$9,214,475	100
Application		
Salaries and employee benefits	2,780,185	30.17
Supplies, services and other costs	1,173,035	12.73
Interest on debt (paid March 1960)	5,000,000	54.26
Addition to working capital	261,255	2.84
	\$9,214,475	100

### Assets Transferred

The cost of the facilities transferred to the Authority by P.C. 1959-204, viz., the Welland, Lachine, Cornwall and Sault Ste-Marie canals, is recorded in the Authority's balance sheet at the amounts shown in the Public Accounts of Canada with an appropriate liability entry in the name of the Government.

At the foot of the income and expense statement will be found a record of operating and maintenance and capital expenses of the non-toll canals for the period April 1 to December 31, 1959. These disbursements, less income earned on the non-toll canals, are recovered by the Authority from Parliamentary appropriations.

### **Financial Statements**

Appended to this report is a copy of the Auditor General's report for the year ended December 31, 1959, together with the balance sheet and the statement of income and expense mentioned therein. There is also included a statement of assets acquired or in course of construction to December 31, 1959.

### Personnel

With the transfer to the Authority on April 1 of the management of Welland, Lachine, Cornwall and Sault Ste-Marie canals, the former operating and maintenance staffs of these facilities became personnel of the Authority to the extent required.

At the end of 1959, the regular staff of the Authority numbered 1299, as shown in the following table:

Head Office (Ottawa)     20       Headquarters (Cornwall)     125       Montreal Office (Construction)	
Capital engineering	
Field (transferred)	
	222
Field Offices (Construction) Dredging (Lachine)	
Beauharnois division	
Welland canal division	
<i>II</i>	77
Operation and Maintenance	
Eastern district: Headquarters	
South Shore canal	
Central district: Headquarters	
Cornwall canal	
Iroquois canal	
Welland canal	
Sault Ste-Marie canal	1 000
	1,000
TOTAL	1,299

On July 8, the Canada Labour Relations Board certified the Canadian Brotherhood of Railway, Transport and General Workers as bargaining agent for some 900 employees engaged in operation and maintenance of the Authority's facilities, and on December 9, the same brotherhood applied

for certification as bargaining agent for the Cornwall headquarters office staff, numbering some 90 employees. This latter application was approved on January 11, 1960. As of the date of this report, two agreements have been signed with the brotherhood, both agreements expiring December 31, 1960.

Mr. C. W. West, who had been a Member of The St. Lawrence Seaway Authority since its inception, July 1, 1954, retired on March 31, 1959.

It is with pleasure that the Members of the Authority tender their appreciation for the loyal and effective service rendered by the officers and employees throughout the organization.

The Honourable George Hees, Minister of Transport, Ottawa.

Sir.

The accounts and financial statements of The St. Lawrence Seaway Authority have been examined for the year ended December 31, 1959. In compliance with the requirements of section 87 of the Financial Administration Act, I now report that, in my opinion:

- (a) proper books of account have been kept by the Authority;
- (b) the financial statements of the Authority
  - (i) were prepared on a basis consistent with that of the preceding year and are in agreement with the books of account, and
  - (ii) in the case of the balance sheet, give a true and fair view of the state of the Authority's affairs as at the end of the financial year, and
  - (iii) in the case of the statement of income and expense, give a true and fair view of the income and expense of the Authority for the period from April 25, 1959, commencement of operations, to December 31, 1959; and
- (c) the transactions of the Authority that have come under my notice have been within the powers of the Authority under the Financial Administration Act and any other Act applicable to the Authority.

Yours faithfully,

A. M. HENDERSON,

Auditor General.

(Established by the St. Lawrence Seaway Authority Act)

### Balance Sheet as at December 31, 1959

	3,255,496 134,570 2,961,392 3,073,983	482,591,775	492,017,216		f Transport, RSON [ Canada
	\$ 3,255,496 134,570 2,961,392 3,073,983 4,79,352,965 285,500,000 284,472,116		- 11		to the Minister of Transp A. M. HENDERSON Auditor General of Canada
LIABILITIES	Accounts Payable  Due to Saint Lawrence Seaway Development Corporation re tolls  Contractors' Holdbacks  Contractors' Security and other Deposits  Proprietory Equity of the Government of Canada:  Capital Assets transferred from Department of Transport as at 1579 352, 865  Loans under section 25 of the Act  At 727, 165  Interest on loans—matured and capitalized	Deduct: Deficit—net loss for the period April 25, 1959, commencement of operations, to December 31, 1959, per Statement of Income and Expense			Certified in accordance with my report dated March 29, 1960 to the Minister of Transport, under section 87 of the Financial Administration Act.  A. M. HENDERSON Auditor General of Canada
	469,782 882,811 884,733 954,733 3,073,983 ted 200,000	.\$ '90', 831 6', 969', 831 7', 410', 641 291, 290, 204 47, 286, 662 3, 322, 849 75, 274, 805	441,366,489 4,473,684 436,892,805 48,630,991	- 485,523,796 492,017,216 - 492,017,216 - 402,017,216 - 403,017,216 - 403,01	D. W. G. OLIVER Comproller B. J. ROBERTS President
ASSETS		Land Buildings Municipal remedial works Charnels, canals and locks Bridges, including alterations to existing structures Floating, shore, shop and other equipment Works under construction	Less: Accumulated provisions for depreciation (excluding Welland Ship Canal)  Non-Toll canals and other properties, at Lachine, Cornwall, Sault Ste.  Transport, at values recorded in the accounts of the Government of Canada		Certified correct: Approved:

### Statement of Income and Expense for the period

April 25, 1959, commencement of operations, to December 31, 1959

DEEP WATERWAY SYSTEM	
Income:  Tolls assessed	1
Tolls assessed	
1713ccnaticous	\$9,214,475
Expense:	42,211,112
Operating and maintenance expenses:	
District superintendence	
Channels, canals and locks 1,758,475	
Bridges	
Grants in lieu of municipal taxes	
Miscellaneous	4
Administrative expenses:	1
Salaries of members and executive officers 64,833	
Other salaries	
Employees' welfare benefits	
Travel and removal	
Communications	
Printing, stationery and office supplies 64,656	
Provision for doubtful accounts	
Miscellaneous	
1,134,95	5
4,052,45	6
Deduct: Portion applicable to non-toll canals	
	3,953,220
Net operating income before providing for interest and depreciation	
Interest on loans from the Government of Canada	
Provisions for depreciation	- 11,949,561
	- 11,777,301
Net loss for the period	. 6,688,306
NONETOLE CANALO AND OTHER PROPERTIES (C. A. '11 100)	
NON-TOLL CANALS AND OTHER PROPERTIES (from April 1, 1959)	
Expense:	
Operating and maintenance expenses	
Construction of works and acquisition of equipment	- 1,968,888
Income:	1,700,000
Rentals, wharfage and other income	. 313,405
Operating deficit and capital expenditures recovered or recoverable from parliamentary	
appropriations	. 1,655,483

Assets acquired or in course of construction to December 31, 1959

	Lachine (Laprairie) Section	Soulanges	Lake St. Francis Section	International Rapids Section	Thousand Islands · Section	Welland Section	General	Total
Land—Right of Way	\$ 6,356,227	\$ 7,365	<b>₩</b>	\$ . 726,911	↔	\$ 1,950,000	\$ 108,994	\$ 9,149,497
Buildings—(Seaway office building, Cornwall, Ville La Salle models building and lock operating buildings	591,287	141,971	1	176,083	1	3,533,305	2,527,185	6,969,831
Municipal Remedial Works—(Relocation of roads, water intakes and sewers)	6,814,306	113,966	1	482,369	1	. 1	J	7,410,641
Channels, canals and locks	71,935,953	47,575,000	504,427	31,236,843	1	139,673,355	1,024,626	291,950,204
Bridges—Acquisition, new construction and alterations to existing structures	34,719,037	865,210	1	3,315,521	1	8,345,300	13,594	47,258,662
Floating, shore, shop and other equipment	1	1	į	-	1	2,044,306	1,308,543	3,352,849
Work under construction	34,901,195	9,734,005	7,075,871	21,636,649 1,038,153	1,038,153	849,684	39,248	75,274,805
	155,318,005	58,437,517	58,437,517 7,580,298		57,574,376 1,038,153 156,395,950	156,395,950	5,022,190	441,366,489

\*The total for the Welland section is made up of expenditures by the Authority amounting to \$25,719,863 (dredging, \$24,870,179 and work under construction, \$849,684) and the cost of the Welland canal transferred from Department of Transport, as per Public Accounts, \$130,716,890, less value of minor equipment (\$40,803) transferred to inventories of materials, etc.

### Address by Her Majesty The Queen

Mr. President,

I am delighted that this occasion which marks the inauguration of a great joint enterprise between our two countries should afford me the first opportunity of welcoming you and Mrs. Eisenhower to Canada. It is with the warmest feelings of friendship that I do so on behalf of the Canadian people, myself and my husband.

The President of the United States will always be welcome here, but today there is an added pleasure and a special warmth in our greeting.

You will always be remembered as one of the great military leaders who brought the free world through the most severe crisis of modern times. The soldiers, sailors and airmen of the Commonwealth, including many thousands of Canadians, were proud to serve under your leadership until the ultimate victory was won.

We welcome you here as President of a great and friendly neighbouring State; but we have a special welcome for you as General Eisenhower.

Today, Canada and the United States are celebrating a victory of another kind. This distinguished company has come together from the two great countries that border this waterway to mark the completion of a combined operation that ranks as one of the outstanding engineering accomplishments of modern times. We can say in truth that this occasion deserves a place in history.

This is nothing new to the Saint Lawrence River which, from the times of Cartier and La Salle, of Wolfe and Montcalm, has been the scene of so much of North America's history.

Depuis le jour où les intrépides explorateurs et colons français ont établi les bases du Canada sur les rives de ce fleuve, des hommes prévoyants ont rêvé d'une voie navigable en eau profonde depuis le port à marée de Montréal jusqu'à la tête des Grands Lacs. Plusieurs générations de Canadiens, tant de langue française que de langue anglaise, ont travaillé à la réalisation de ce projet grandiose. Même au dix-septième siècle, il y eut déjà des projets visant à contourner les rapides de la Chine. Ces rapides doivent, incidemment, leur nom à la croyance générale de l'époque qu'ils bloquaient la route vers la Chine. Dollier de Casson, dès mille six cent quatre vingt, avait déjà envisagé la possibilité de surmonter cet obstacle. Sa tentative hardie était cependant vouée à l'échec, car il était bien en avant de son siècle. Il demeure cependant le pionnier de la canalisation du Saint-Laurent et nous nous devons aujourd'hui de lui témoigner notre reconnaissance.

Since the time of Dollier de Casson, men have dreamed and worked for two and a half centuries to make this river navigable, and now at last it is a reality. This waterway will carry ocean shipping from tidewater to the very heart of the continent, a distance of more than two thousand miles. It will affect the lives of many generations of our peoples; and it is bound to exercise a profound influence on the maritime trading nations of the world.

It is right we should acknowledge the foresight of those who first conceived this great plan. But we should also acknowledge the courage and persistance of those men in public life, in both countries, who brought about the political agreement essential to putting the project in hand. When their work was done, it rested on the engineers to design these vast and complex works, which finally began to take shape in the hands of the men who drove the trucks, poured the concrete and performed all the other tasks to complete the Seaway. To each and every one of them I offer my congratulations and the congratulations of their fellow citizens.

Just ninety-nine years ago my great-grandfather, King Edward VII, then Prince of Wales, came to open the Victoria Bridge. In those days that bridge was regarded as a tremendous feat of engineering. It was obviously a good bridge because nearly one hundred years later it is still in use. In fact I shall sail under it shortly. It was also the final link in a new railway line more than two thousand miles long. So in 1860 people thought of the Victoria Bridge as a striking symbol of Canadian progress and achievement.

Today, within sight of the spot where the Prince of Wales stood in 1860, we are opening a project with exactly the same significance for our own age. In the context of a much larger and stronger Canada, this enterprise reflects the same confidence and determination. The same creative vision has conceived and built a highway which will open the middle of this continent to the commerce of the world.

Je vois dans l'achèvement des travaux de la canalisation du Saint-Laurent, une signification qui dépasse les avantages économiques qui en découleront. Cette réalisation ouvre, en premier lieu, un nouveau chapitre de l'histoire de la confédération en établissant de nouveaux liens entre les deux principaux groupes ethniques dont la présence donne à la nation canadienne un caractère particulier. Le succès de cette entreprise démontre en outre, qu'il est possible pour deux Etats voisins de co-opérer dans un esprit de confiance mutuelle à l'édification d'une œuvre commune.

This vast undertaking has been a co-operative effort of Canada and the United States, of the Power Authority of the State of New York and the Hydro-Electric Power Commission of the Province of Ontario. The two nations built it together and the two nations will share its benefits. Power will flow from the new turbines to drive factories on both sides of the river. Ocean-going ships will go up and down this waterway, taking goods to and

from American and Canadian ports, and exchanging the products of North America for those from the rest of the world.

More than all this, it is a magnificent monument to the enduring friendship of our two nations and to their partnership in the development of North America. That partnership is most agreeably symbolized, Mr. President, in the fact that you and I have joined together to perform this ceremony today.

### Address by President Dwight D. Eisenhower

Citizens of Canada and the United States,

It is a great personal privilege to be a part of the ceremony of the official opening of the St. Lawrence Seaway. The occasion gives to me the opportunity to express again to Your Majesty the lasting respect, admiration and affection of the citizens of the United States for you, and for all the people of Canada over whom you reign as their gracious Queen. Moreover, I prize this renewal of my friendly contacts with your eminent Prime Minister who was so warmly hospitable when I visited Ottawa last year.

Because we are in this beautiful part of Canada where French is principally spoken, will you permit me a single halting sentence of my western prairie brand of that language:

Je suis très heureux de me retrouver parmi vous au Canada où, il y a un an, j'ai fait un si agréable séjour.

This waterway, linking the oceans of the world with the Great Lakes of the American continent, is the culmination of the dreams of thousands of individuals on both sides of our common Canadian-United States border. It is the latest event in a long history of peaceful parallel progress by our two peoples.

Side by side we have grown up together. Long ago we found solutions for many of the problems characteristic of pioneering peoples. We have built nations out of vast stretches of virgin territory and transformed a wilderness into one of the most productive areas on earth. We are still developing better means of production and communication and supporting measures needed for the welfare of our respective peoples.

A notable spirit of cooperation has been responsible for major steps in our past progress. That spirit animates both of us today. We enjoy between us a larger volume of reciprocal trade than do any other two countries in the world. Our people move freely back and forth across a boundary that has known neither gun nor fortress in over a century. Our citizen-soldiers have three times fought together in the cause of freedom and today we are as one in our determination to defend our homelands. We have lived in peace with each other for nearly a century and a half. We cherish this record.

There have been and are still problems to solve between us. But in the past, as now, we have never faltered in our conviction that these must be settled by patient and understanding negotiation, never by violence.

So today, our two nations celebrate another triumph of peaceful living. The St. Lawrence Seaway presents to the world a 2300-mile waterway of locks, lakes, and man-made channels. Its completion is a tribute to those far-sighted and persevering people who across the years pushed forward to their goal despite decades of disappointments and setbacks. We pause to salute those who have shared in this task, from the architects and the planners to the artisans and the workers who have spent countless hours in its construction. Two of the leaders who helped create the sentiment for this great development were Prime Minister Bennett of Canada and former President Herbert Hoover.

The parade of ships already passing through the Seaway on their way to and from the heart of the continent, strikingly demonstrates the economic value of this new channel. But the Seaway is far more than a technical and commercial triumph. It has more significance than could the successful construction of even this notable aid to commerce and navigation. It is, above all, a magnificent symbol to the entire world of the achievements possible to democratic nations peacefully working together for the common good.

May this example be never forgotten by us, may it never be ignored by others. For in the reasonable resolution of the acute international problems of our time rests the single hope for world prosperity and happiness in peace, with justice for all.







